

Work Order ID 145617

Friday, May 06, 2016 10:34:07 AM

145617

Page 1

Item ID: D2945 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mounting Plate
Start Date: 4/29/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 5/5/2016 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: W Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2945	Rev A								
100	FLOW WATER JET	0.00							
100									
Waterjet	Memo	0.30							
FLOW CNC Waterjet	1-Cut as per Dwg D2945 Dwg Rev: <u>A</u> Prog Rev: <u>A</u> 2- Deburr if necessary								
						13			P2016/08/02 DAS 45 2016-8-3 9-89
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.10							
Quality Control									
						13			P2016/08/02 DAS 45 2016-8-3 9-89
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.20							
Quality Control									
						13			P2016/08/02 DAS 16 9-89 16/08/08

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

DQA:

Date: 2016-10-7

QA Closed: Den

Date:

OCT 03 2016 WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: <u>145617</u>	DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS			
Part No. <u>122945</u>		Skid-tube ☐	Crosstube ☐	Water Jet ☒	Engineering ☐
NCR No. <u>16-6078</u>		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design				Holes in part where		Re-work holes as per	PR		
Doc/Data				Found to be inconsistent,	DAS	drawing using drill			
Equip/Tooling				varying dimension and	9	bit		DAS	DAS
Handling/Pre				some with tapered	9-89		16/08/08	16	16
Material								9-89	9-89
Operator					16-08-05	Debur		16/08/08	16/08/08
Offset/Setup				R.C. operator, setup		Fill in new F.A.I.			
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☒ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge	☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Item ID: D2945 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mounting Plate
Start Date: 4/29/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 5/5/2016 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.50				(13)			2016/08/08 DAS 15 9-89 BEB
140 *140* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum in 134798. Memo POWDER COAT Start Time: 8:20 Oven Temperature: 320° Finish Time: 3:55	0.00 0.10				13	1608-18		DAS 34 9-89
150 *150* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.10				(13)			DAS 38 9-89 AUG 19 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
12-15-2011 12-17-2011 12-20-2011 12-22-2011 12-23-2011 12-27-2011 12-28-2011 12-29-2011 12-30-2011 1-2-2012 1-3-2012 1-4-2012 1-5-2012 1-8-2012 1-9-2012 1-10-2012 1-11-2012 1-12-2012 1-15-2012 1-16-2012 1-17-2012 1-18-2012 1-19-2012 1-22-2012 1-23-2012 1-24-2012 1-25-2012 1-26-2012 1-27-2012 1-30-2012 1-31-2012 2-1-2012 2-2-2012 2-5-2012 2-6-2012 2-7-2012 2-8-2012 2-9-2012 2-13-2012 2-14-2012 2-15-2012 2-16-2012 2-17-2012 2-20-2012 2-21-2012 2-22-2012 2-23-2012 2-26-2012 2-27-2012 2-28-2012 2-29-2012 2-29-2012 3-1-2012 3-2-2012 3-5-2012 3-6-2012 3-7-2012 3-8-2012 3-9-2012 3-12-2012 3-13-2012 3-14-2012 3-15-2012 3-16-2012 3-19-2012 3-20-2012 3-21-2012 3-22-2012 3-23-2012 3-26-2012 3-27-2012 3-28-2012 3-29-2012 3-30-2012 4-2-2012 4-3-2012 4-4-2012 4-5-2012 4-9-2012 4-10-2012 4-11-2012 4-12-2012 4-13-2012 4-16-2012 4-17-2012 4-18-2012 4-19-2012 4-20-2012 4-23-2012 4-24-2012 4-25-2012 4-26-2012 4-27-2012 4-30-2012 5-1-2012 5-2-2012 5-3-2012 5-4-2012 5-7-2012 5-8-2012 5-9-2012 5-10-2012 5-14-2012 5-15-2012 5-16-2012 5-17-2012 5-18-2012 5-21-2012 5-22-2012 5-23-2012 5-24-2012 5-25-2012 5-29-2012 5-30-2012 5-31-2012 6-4-2012 6-5-2012 6-6-2012 6-7-2012 6-8-2012 6-11-2012 6-12-2012 6-13-2012 6-14-2012 6-15-2012 6-18-2012 6-19-2012 6-20-2012 6-21-2012 6-22-2012 6-25-2012 6-26-2012 6-27-2012 6-28-2012 6-29-2012 6-30-2012 7-3-2012 7-4-2012 7-5-2012 7-6-2012 7-9-2012 7-10-2012 7-11-2012 7-12-2012 7-13-2012 7-16-2012 7-17-2012 7-18-2012 7-19-2012 7-20-2012 7-23-2012 7-24-2012 7-25-2012 7-26-2012 7-27-2012 7-30-2012 7-31-2012 8-6-2012 8-7-2012 8-8-2012 8-9-2012 8-13-2012 8-14-2012 8-15-2012 8-16-2012 8-17-2012 8-20-2012 8-21-2012 8-22-2012 8-23-2012 8-24-2012 8-27-2012 8-28-2012 8-29-2012 8-30-2012 8-31-2012 9-3-2012 9-4-2012 9-5-2012 9-6-2012 9-7-2012 9-10-2012 9-11-2012 9-12-2012 9-13-2012 9-14-2012 9-17-2012 9-18-2012 9-19-2012 9-20-2012 9-21-2012 9-24-2012 9-25-2012 9-26-2012 9-27-2012 9-28-2012 9-29-2012 9-30-2012 10-1-2012 10-2-2012 10-3-2012 10-4-2012 10-5-2012 10-8-2012 10-9-2012 10-10-2012 10-11-2012 10-12-2012 10-15-2012 10-16-2012 10-17-2012 10-18-2012 10-19-2012 10-22-2012 10-23-2012 10-24-2012 10-25-2012 10-26-2012 10-29-2012 10-30-2012 10-31-2012 11-5-2012 11-6-2012 11-7-2012 11-8-2012 11-9-2012 11-12-2012 11-13-2012 11-14-2012 11-15-2012 11-16-2012 11-19-2012 11-20-2012 11-21-2012 11-22-2012 11-23-2012 11-26-2012 11-27-2012 11-28-2012 11-29-2012 11-30-2012 12-3-2012 12-4-2012 12-5-2012 12-6-2012 12-7-2012 12-10-2012 12-11-2012 12-12-2012 12-13-2012 12-14-2012 12-17-2012 12-18-2012 12-19-2012 12-20-2012 12-21-2012 12-24-2012 12-25-2012 12-26-2012 12-27-2012 12-28-2012 12-29-2012 12-30-2012				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

Work Order ID 145617

Friday, May 06, 2016 10:34:07 AM

145617

Page 3

Item ID: D2945 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mounting Plate
Start Date: 4/29/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 5/5/2016 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: <u>ST014</u>	0.00							
160						<u>13</u>	DAS		
Packaging	Memo	0.10					21		AUG 19 2016
Packaging							9-89		
170	QC21- Final Inspection - Work Order Release	0.00					DAS		
170							21		AUG 22 2016
QC	Memo	1.00					9-89		
Quality Control							DAS		
							21		AUG 22 2016
							9-89		

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
2AQ IS 02-6 2AQ IS 02-6				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Friday, May 06, 2016 10:34:06 AM

Page 1

Work Order ID: 145617

145617

Parent Item: D2945

D2945

Parent Item Name: Mounting Plate

Start Date: 4/29/2016

Required Date: 5/5/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP B00.01.27Added inspect level 8, removed P/O for powder coatingEC
IPP Rev:C Now on Waterjet 06-12-13 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M6061T6S.188

Purchased

No

100

sf

21.6200

0.08

0.842105

M6061T6S 188

PR 2016/08/02

6061-T6 .188 Sheet

Location

Loc Qty

Loc Code

MAT020

21.62

124572

4.25

m129146

17.37

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

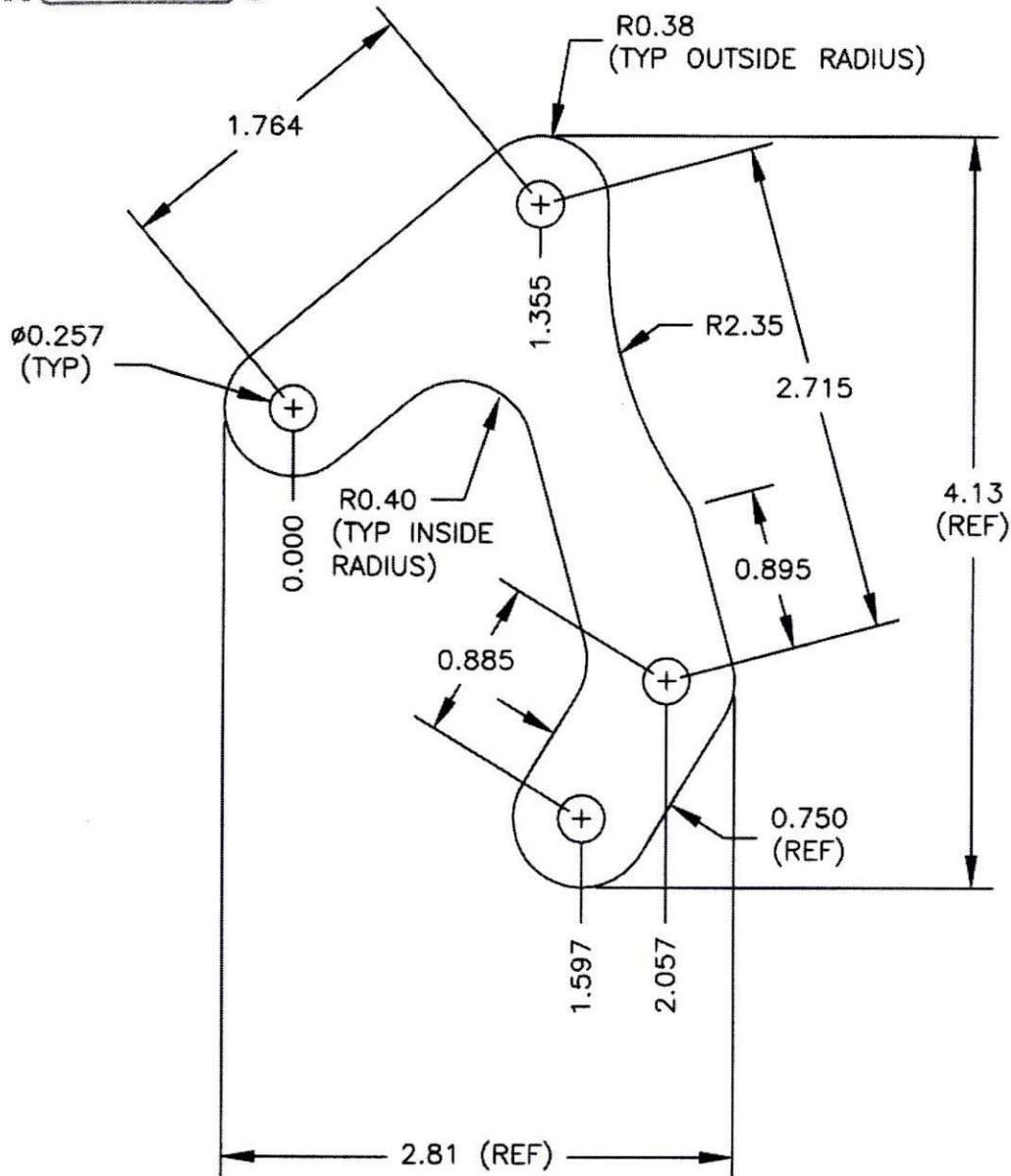
Work Order update only ☐

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Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
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Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2945	REV. A SHEET 1 OF 1
DATE 99.12.13		TITLE STEP MOUNTING PLATE	SCALE 1:1
A	99.12.13	NEW ISSUE	

RELEASED
99.12.21 DS



MATERIAL: 6061-T6 ALUMINUM (QQ-A-250/11) 0.188 THICK
FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020 MAX
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
ALL DIMENSIONS ARE IN INCHES

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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					